

Abstract of the Disclosure

The utility of pulse volume measurement is expanded to detection of many conditions which have previously not been detected or have been detected using more complicated techniques. Such conditions include blood loss, septic shock, cardiogenic shock, neonatal sepsis, patent ductus arteriosus, limb ischemia, intra-aortic balloon pump performance, peripheral vascular disease, congestive heart failure, the effectiveness of vasoactive medications, syncope, dehydration, pre-eclampsia, deep vein thrombosis, thermal injuries, vascular instability due to renal dialysis, compromising of circulation to the hand caused by radial artery harvesting, changes in cardiac output, and hypertension. According to the present invention, such diagnoses can be performed by taking one measurement, by taking measurements over time to detect a change or by taking measurements before and after application of a treatment or stimulus.